

## Some important diseases of Livestock and their control measures

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### Introduction

Livestock diseases contribute to an important set of problems within livestock production systems. These include animal welfare, productivity losses, uncertain food security, loss of income and negative impacts on human health. Economic losses caused by the disease are mainly due to loss in milk production, reduction in working ability of work animals, reduction in the body weight leading to reduced yield of meat. In addition to this, the milk and milk products, meat and hide and skin are not accepted by countries free from the disease-causing reduction in export potential of livestock industry in India. Livestock disease management can reduce disease through improved animal husbandry practices.

### Haemorrhagic Septicemia

This is an acute bacterial disease of cattle and buffaloes which usually occurs during monsoon. It is a contagious bacterial disease caused by two serotypes of *Pasteurella multocida*, B2 and E2. It affects cattle (*Bos taurus* and *B. indicus*) and water buffaloes (*Bubalus bubalis*) with a high mortality rate in infected animals. It is regarded as one of the most serious diseases of large ruminants in south east Asia. Mortality rate may be as high as 80 %. Germs of this disease survive longer in humid and waterlogged conditions.

### Signs of disease

HS is seen as an acute condition, with sudden and serious onset that easily causes death. Animals become dull and have high fever. They refuse to eat and salivate more than normally. There is also discharge from the nose. Swellings develop typically and quickly, especially around the throat, the brisket, the dewlap and sometimes around the head.

The tongue may swell also and protrude from the mouth. Finally, the animal has difficulty breathing because the swellings impair respiration and it may die from this obstruction of the respiratory tract. In some cases, a bloody diarrhoea may be an obvious part of the



disease picture. Sick animals may die in a few hours but sometimes disease lasts up to 3-4 days before death occurs in untreated animals. For animals with acute disease, which are left untreated, the death rate is high.

### Transmission of disease

The bacteria can normally be found in a small percentage of a buffalo or cattle population, apparently not causing any disease. When fodder supply and climate are particularly unfavourable, disease outbreaks occur. This is often seen at the beginning of the rainy season: the scarce fodder supply at the end of dry season, the fodder change, and the increased workload, that some animals are subject to with the onset of rainy season, stress the animals and the number of outbreaks may rise dramatically. Transportation over long distances and/or under bad (crowded) conditions, may also cause disease outbreaks. The bacteria can be found in saliva and nasal discharge from sick animals. In this way food, drinking water and surroundings may be contaminated, and the bacteria can survive here for some hours. Other animals may then pick up the bacteria and, depending on their general condition, develop disease.

### Control

- Segregate the sick animal from healthy ones and avoid contamination of feed, fodder and water.
- Avoid crowding especially during wet seasons.
- Vaccinate all animals which are 6 months and above of age annually before the onset of monsoon in endemic areas.

## Treatment

- Treatment is usually ineffective unless treated very early, that is during the stage when fever sets in.
- Few animals survive once clinical signs develop.
- Case fatality approaches 100% if treatment is not followed at the initial stage of infection

## Black Quarter (Black - leg)

It is an acute infectious and highly fatal, bacterial disease of cattle. Buffaloes, sheep and goats are also affected. Young cattle between 6-24 months of age, in good body condition are mostly affected. It is caused by *Clostridium chauvoei*. It is soil-borne infection which generally occurs during rainy season. In India, the disease is sporadic (1-2 animal) in nature.

## Symptom

The major symptom of this disease is high fever (106-105°F), Loss of appetite, Depression and dullness, suspended rumination, Rapid pulse and heart rates, Difficult breathing (dyspnea), Lameness in affected leg, Crepitation swelling over hip, back & shoulder. Swelling is hot & painful in early stages whereas cold and painless inter. Recumbency (prostration) followed by death within 12-48 hrs.



## Control

Vaccinate all animals which are 6 months and above of age annually before the onset of monsoon in endemic areas. Burning the upper layer of soil with straw to eliminate spores may be of help in endemic areas. Sprinkle lime over carcass at the time of burial.

## Treatment

Treatment may be effective in initial stages of infection. However, in most cases treatment is not worth the while.

## Foot-and-mouth disease

The foot-and-mouth disease is a highly communicable disease affecting cloven-footed animals. It is characterized by fever, formation of vesicles and blisters in the mouth, udder, teats and on the skin between the toes and above the hoofs. Animals recovered from the disease present a characteristically rough coat and deformation of the hoof. In India, the disease is widespread and assumes a position of importance in livestock industry. The disease spreads by direct contact or indirectly through infected water, manure, hay and pastures. It is also conveyed by cattle attendants. It is known to spread through recovered animals, field rats, porcupines and birds.



## Symptoms

- Fever with 104-105 F
- Profuse salivation ropes of stringy saliva hang from mouth
- Vesicles appear in mouth and in the inter digital space
- Lameness observed
- Cross bred cattle are highly susceptible to it



## Treatment

- The external application of antiseptics contributes to the healing of the ulcers and wards off attacks by flies.
- A common and inexpensive dressing for the lesions in the feet is a mixture of coal-tar and copper sulphate in the proportion of 5:1.

## Precautions

- Heavy milch animals and exotic breeds of cattle bred for milk should be protected regularly.

- It is advisable to carry out two vaccinations at an interval of six months followed by an annual vaccination programme.
- Isolation and segregation of sick animals. It should be informed immediately to the veterinary doctor
- Disinfection of animal sheds with bleaching powder or phenol
- Attendants and equipment's for sick animals should be ideally separate
- The equipment's should be thoroughly sanitized
- Proper disposal of left-over feed by the animal
- Proper disposal of carcasses
- Control of flies

### **Foot Rot/ Foul in the Foot**

Foot rot is a common cause of lameness in cattle and occurs most frequently when cattle on pasture are forced to walk through mud to obtain water and feed. However, it may occur among cattle in paddocks as



well, under apparently excellent conditions. Foot rot is caused when a cut or scratch in the skin allows infection to penetrate between the claws or around the top of the hoof.

### **Control**

Individual cases should be kept in a dry place and treated promptly with medication as directed by a veterinarian. If the disease becomes a herd problem a foot bath containing a 5% solution of copper sulphate placed where cattle are forced to walk through it once or twice a day will help to reduce the number of new infections. In addition, drain mud holes and cement areas around the water troughs where cattle are likely to pick up the infection. Keep pens and areas where cattle gather as clean as possible. Proper nutrition regarding protein, minerals and vitamins will maximize hoof health.